



Visit to Penang Automation Cluster (PAC) Sdn Bhd

By

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On Friday, 13 June 2025, the Electronic Engineering Technical Division (eETD) of The Institution of Engineers, Malaysia (IEM) successfully organised a technical visit to Penang Automation Cluster Sdn Bhd (PAC) located in Batu Kawan, Penang. The visit was attended by a group of 13 participants from diverse engineering backgrounds, aiming to enhance their exposure to the latest advancements in automation, precision manufacturing, and smart factory practices.

The visit began with a warm welcome from the PAC team, followed by a comprehensive technical briefing conducted by the General Manager, Mr. H'ng Chuan Keat. The session provided a detailed overview of PAC's operational structure, its strategic role in Malaysia's industrial supply chain, and the integration of modern automation into manufacturing workflows. Mr. H'ng emphasised PAC's collaborative approach with industry stakeholders and its commitment to digital transformation, efficiency, and sustainable engineering practices.



Technical presentation by Mr. H'ng Chuan Keat

A key highlight of the briefing was the introduction of the V-One real-time monitoring system used across PAC's production lines. This digital platform enables live tracking of machine utilisation, operational performance, and system efficiency through interactive dashboards. Participants were impressed by how the system enhanced decision-making, reduced downtime, and provided full visibility into shop floor activities, an excellent example of smart factory implementation in a local context.

Following the briefing, participants were taken on a guided tour of the facility. They observed various stages of PAC's manufacturing operations, including live CNC machining, sheet metal processing, tool and die work, and surface finishing. A particularly engaging part of the tour was the demonstration of PAC's robotic welding system, which illustrated the company's adoption of automation for precision welding, significantly improving product consistency and operational efficiency. The V-One system was also seen in operation, displaying real-time metrics that informed operators and engineers on system health and productivity.



Sharing on real time tracking via V-One system during the tour



Visiting the grinding facilities



Robotic arm welder

Throughout the tour, all safety protocols were strictly followed, and participants were given opportunities to ask technical questions and engage in discussions with PAC's engineers and production staff.

The visit concluded with a presentation of a token of appreciation from IEM to the PAC management, symbolising mutual respect and the value of continued industry-academia collaboration. A group photo session was held to commemorate the visit, followed by networking among the participants and PAC personnel.



Group photo of the participants

The technical visit to Penang Automation Cluster Sdn. Bhd. proved to be highly valuable for all participants. It provided deep insights into the application of smart automation, real-time monitoring, and advanced manufacturing technologies in a local industrial setting. The hands-on exposure and direct interaction with industry experts enriched the participants' understanding and professional outlook. The visit aligns with IEM's ongoing commitment to professional development and strengthening the relationship between engineering practice and industry needs.